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(54) Title: A PROCESS TO STUDY CHANGES IN GENE EXPRESSION IN T LYMPHOCYTES

(57) Abstract

Methods are disclosed to identify T lymphocyte genes that are differentially expressed upon exposure to a pathogen (viral or bacterial), immunogen, antigen, or in a sterile inflammatory disease, autoimmune disease, immunodeficiency disease, lymphocytic cancers, or graft versus host rejection. The method involves the preparation of a gene expression profile of a T lymphocyte population exposed to a pathogen or isolated from a subject having one of the aforementioned pathologies and comparing that profile to a profile prepared from quiescent T lymphocytes. The present invention is particularly useful for identifying cytokine genes, genes encoding cell surface receptors and genes encoding intermediary signalling molecules. Related methods for identifying therapeutic or prophylactic immunomodulatory agents are presented. Articles of manufacture are disclosed that comprise selected grouping of nucleic acids, affixed to a solid support, that correspond to genes that are differentially expressed in various populations or subpopulations of T lymphocytes at variations stages of T cell differentiation, in quiescent versus activated T lymphocytes or normal versus diseased T lymphocytes.